

SERIAL NO. \_\_\_\_\_  
MITCHELL, JUTTU, SMITH

PATENT APPLICATION  
STC-03-0010

#### **ABSTRACT**

Aromatization of alkanes having one to four carbon atoms per molecule to aromatics, such as benzene, toluene and xylenes (BTX), uses a catalyst of a crystalline zeolite on which platinum has been deposited, specifically a platinum-containing ZSM-5. A byproduct of the process is a light gas fraction of methane and ethane. The use of a platinum-containing ZSM-5 catalyst in an alkane aromatization process, such as the Cyclar process, suppresses the formation of methane and increases selectivity to BTX. The high content of ethane relative to methane in the light gas fraction allows this process effluent to be a feedstream for a cracker.